Rice University

Department of Electrical and Computer Engineering

ELEC/COMP693: Embedded Computer Architecture and Systems

Fall 2014

Course Syllabus

This syllabus describes the policies and practices of this course, please read carefully.

1. Contact Information

Instructor:	Michael C. Brogioli	Joseph Cavallaro
Office:	DH 2029 (Fridays)	DH 3042
Telephone:	713.732.0217	
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Web Page:	TBD	
Classroom:	DH 2014 (Fishbowl)	
Time:	9-11 AM	

2. Course Summary

Embedded computing devices now span from military applications to multimedia, communications, industrial automation, automotive and beyond. Embedded devices are also becoming increasingly connected and ubiquitous. By 2015 it is anticipated that in excess of 15 billion intelligent connected devices will be in service. Even today, millions of intelligent connected devices are online resulting in an ever increasingly "intelligent planet".

This seminar will be a discussion oriented class about state of the art work in embedded computer architecture with secondary contributions on how such systems related to embedded computing, compiler technology, programmability and flexibility. The course will cover subject matter related to: 5G wireless, video encoder technology such as H.265, cloud computing, computer architecture and software technology such as Microsoft's recently announced Delorean.

3. Course Objectives

Students will learn and discuss current trends in embedded computing system architecture, software, networking, telecom and multimedia. In addition, students will gain an understanding of how to present their own research in a group environment in both oral and presentation format.

4. Course Format

Each week a different student will give a 30 minute presentation of the week's paper, leading the class discussion and Q&A sessions on the topic. Instructor will guide the discussion. Each non-presenting student will provide feedback on the student's presentation via written form at the end of class.

Each week, all students except for presenter will upload to OwlSpace:

- Contributions of the paper (~5 sentences)
- Positive things they liked about the paper (~3 sentences)
- Negative things they liked about the paper (~3 sentences)
- Possible points of the paper the student was unclear on (~3 sentences)
- Possible future experiments the student would like to see performed (~3 sentences)

5. Grading

Students grades will be based on the following criteria (tentatively, depending on class size)

Class lead presentations (50%)
Written summaries provided by email (20%)
In class feedback forms (10%)
Attendance (20%)